ELSEVIER

Chemical Geology 169 (2000) 487–488

CHEMICAL GEOLOGY
INCLUDING
ISOTOPE GEOSCIENCE

www.elsevier.com/locate/chemgeo

Contents Volume 169, 2000

Vol. 169, Nos. 1–2

Special Issue: Special Issue in honour of G.J. Wasserburg, Isotope tracers in Geochemistry and Cosmochemistry

Editorial 1

In pursuit of the ^{40}K branching ratios: K-Ca and ^{39}Ar–^{40}Ar dating of gem silicates
Th.F. Nägler and I.M. Villa 5
The half-lives of uranium-234 and thorium-230
H. Cheng, R.L. Edwards, J. Hoff, C.D. Gallup, D.A. Richards and Y. Asmerom 17
Hf–W internal isochrons for ordinary chondrites and the initial $^{182}Hf/^{180}Hf$ of the solar system
D.-C. Lee and A.N. Halliday 35
Isotopic fractionation as a probe of heating processes in the solar nebula
H. Nagahara and K. Ozawa 45
Accretion of Moon and Earth and the emergence of life
G. Arrhenius and A. Lepland 69
Some selected comments on cosmic radioactivities
M. Arnould, G. Meynet and N. Mowlavi 83
The coral record of last interglacial sea levels and sea surface temperatures
M.T. McCulloch and T. Esat 107
Mg, Sr and Sr isotope geochemistry of a Belgian Holocene speleothem: implications for paleoclimate reconstructions
S. Verheyden, E. Keppens, I.J. Fairchild, F. McDermott and D. Weis 131
Timing and hydrological conditions of Sapropel events in the Eastern Mediterranean, as evident from speleothems, Soreq cave, Israel
M. Bar-Matthews, A. Ayalon and A. Kaufman 145
Neodymium isotopes in basalts of the southwest basin and range and lithospheric thinning during continental extension
D.J. DePaolo and E.E. Daley 157
High precision lead isotope systematics of lavas from the Hawaiian Scientific Drilling Project
W. Abouchami, S.J.G. Galer and A.W. Hofmann 187
Major and trace element abundances, and strontium isotopes in the Nyong basin rivers (Cameroon): constraints on chemical weathering processes and elements transport mechanisms in humid tropical environments
J. Viers, B. Dupré, J.-J. Braun, S. Deberdt, B. Angeletti, J.N. Ngoupayou and A. Michard 211
H_2O diffusion in rhyolitic melts and glasses
Y. Zhang and H. Behrens 243

Vol. 169, Nos. 3–4

Special Issue: Geomicrobiology Technical Session 06, 110th Geological Society of America Annual meeting, Toronto, October 26–29 1998

Preface 263

Quantifying the effects of bacteria on adsorption reactions in water–rock systems
J.B. Fein 265
Solid phase capture of strontium by the iron reducing bacteria *Shewanella alga* strain BrY
N. Parmar, L.A. Warren, E.E. Roden and F.G. Ferris 281

Reduction of humic substances and Fe(III) by hyperthermophilic microorganisms
D.R. Lovley, K. Kashefi, M. Vargas, J.M. Tor and E.L. Blunt-Harris 289
Mineral transformation associated with the microbial reduction of magnetite
H. Dong, J.K. Fredrickson, D.W. Kennedy, J.M. Zachara, R.K. Kukkadapu and T.C. Onstott 299
Occurrence and distribution of diverse populations of magnetic protists in a chemically stratified coastal salt pond
D.A. Bazylinski, D.R. Schlezinger, B.H. Howes, R.B. Frankel and S.S. Epstein 319
Cyanobacterial viability during hydrothermal biomineralisation
V.R. Phoenix, D.G. Adams and K.O. Konhauser 329
Geomicrobiology of carbonate–silicate microbialites from Hawaiian basaltic sea caves
R.J. Léveillé, W.S. Fyfe and F.J. Longstaffe 339
Rates of bacteria-promoted solubilization of Fe from minerals: a review of problems and approaches
B.E. Kalinowski, L.J. Liermann, S. Givens and S.L. Brantley 357
Microbial controls on phosphate and lanthanide distributions during granite weathering and soil formation
A.E. Taunton, S.A. Welch and J.F. Banfield 371
Geochemical and biological aspects of sulfide mineral dissolution: lessons from Iron Mountain, California
K.J. Edwards, P.L. Bond, G.K. Druschel, M.M. McGuire, R.J. Hamers and J.F. Banfield 383
Microbiology and geochemistry in a hydrogen-sulphide-rich karst environment
L.D. Hose, A.N. Palmer, M.V. Palmer, D.E. Northup, P.J. Boston and H.R. DuChene 399
The role of ''blebbing'' in overcoming the hydrophobic barrier during biooxidation of elemental sulfur by *Thiobacillus thiooxidans*
C. Knickerbocker, D.K. Nordstrom and G. Southam 425
Microbial populations associated with the generation and treatment of acid mine drainage
S.G. Benner, W.D. Gould and D.W. Blowes 435
Recent calcite spar in an aquifer waste plume: a possible example of contamination driven calcite precipitation
K.J. Tobin, F.S. Colwell, T.C. Onstott and R. Smith 449
Controls on bacterial sulphate reduction in a dual porosity aquifer system: the Lincolnshire Limestone aquifer, England
S.H. Bottrell, S.J. Moncaster, J.H. Tellam, J.W. Lloyd, Q.J. Fisher and R.J. Newton 461
Temporal variations in parameters reflecting terminal-electron-accepting processes in an aquifer contaminated with waste fuel and chlorinated solvents
J.T. McGuire, E.W. Smith, D.T. Long, D.W. Hyndman, S.K. Haack, M.J. Klug and M.A. Velbel 471

Contents Volume 169, 2000 487